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ABSTRACT

A study examined employer involvement in the school-to-work (STW) internship strategy by comparing characteristics of participating employers to a sample of nonparticipants. The five STW programs chosen for study were ones in which students spent a significant amount of time in work-based learning outside the classroom. A telephone survey gathered responses from 334 participating employers and 323 nonparticipants. Findings indicated that almost 25 percent of employers already provided internships. The most important motivation for participation remained philanthropic, although a strong minority of firms reported that bottom-line oriented reasons were the most important motivations. Students' work-based learning experiences were for the most part not in the traditional youth employing sectors. Nearly one-half were in administrative support positions. Interns were also overrepresented in technical occupations. Firms tended to provide higher quality placements when they expected the interns to stay at the firm. Data suggested higher quality for internships in not-for-profit and government organizations than in private, for-profit firms, but the internships in the for-profits provided somewhat more opportunity to learn. Implications for future research and program development were as follows: need for a more comprehensive analysis of costs and benefits of participation and need for better measures of quality. (Appendixes contain 22 references and additional data.) (YLB)

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ACHIEVING SCALE AND QUALITY IN SCHOOL-TO-WORK INTERNSHIPS: FINDINGS FROM AN EMPLOYER SURVEY

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EXECUTIVE SUMMARY

Work-based learning is a central component of the school-to-work strategy. Yet this component is particularly difficult to build and institutionalize because it requires that educators and program organizers find appropriate settings where students can have work-based learning experiences. A widespread system of work-based learning in the form of internships or apprenticeships will need to involve thousands of employers willing to provide placements. Furthermore, those employers need to be willing to work with schools to see that those placements have educational value. Reluctant employers are not likely to cooperate enthusiastically in creating a positive learning environment on the job. Thus, the process of employer recruitment also has a strong bearing on the quality of internship placements.

This report examines the issue of employer involvement in the school-to-work strategy by comparing the characteristics of participating employers to a comparison sample of nonparticipating employers. A multilevel research design was used, combining case studies of specific programs with a survey of employers participating in those programs and a survey of a comparison group of nonparticipating employers in those same labor markets. The motivations of employer participants are identified. We also explore the quality of work-based learning placements to try to identify the relationship between the characteristics and motivations of employer participants and the quality of the internships that they provide. By better understanding the process of employer recruitment and the motivations of participants and how those relate to the quality of placements, we hope to help program operators find an adequate number of good-quality placements. Finally, our survey of nonparticipating employers provides information that allows us to estimate the rate of employer participation in internship programs in the cities that we surveyed.

Existing research on employer participation in work-based learning falls into two broad categories. The first includes theoretical discussions about employer participation and for the most part these tend to be somewhat pessimistic, failing to find any strong incentives for employers to participate, although noting potential reasons for them to do so. The theoretical arguments include a useful framework of three types of motivation which may affect employers' decisions to participate in school-to-work programs. These three types of motivation are philanthropic, individual, and collective.

The second type of research consists of empirical studies, most of which are case studies of school-to-work programs which include some attention to the problems of employer recruitment. These tend to be somewhat more optimistic, reporting that employers are happy with the experiences and indeed that the student interns usually have exceeded the employers' expectations. A small number of the empirical studies comprise surveys of participating employers and these have mixed conclusions about the feasibility of widespread participation. Yet other recent studies are highlighting programs that are experiencing success in retaining and recruiting increasing numbers of employer partners.

This report expands our knowledge of the issue in two primary ways. First, our methodology allows a comparison between participating and nonparticipating employers. Any attempt to understand why firms participate, what the characteristics of participating firms are, and how nonparticipants might be recruited requires an investigation of both participating and nonparticipating firms. Second, previous studies have not explored the relationship between employer recruitment and program quality.

Sample and Methodology

The school-to-work programs chosen for this study were ones in which students were spending a significant amount of time in work-based learning outside of the classroom, as we believed that these would be the programs which require the most commitment from employer partners. In total, twelve programs at nine sites, both long-running and newly established, were selected as research sites; however, only five of these are survey sites. The five survey site programs are City-as-School in New York City, Kalamazoo Education for Employment in Kalamazoo, Michigan, the cooperative education program at LaGuardia Community College in New York City, the Greater Lehigh Valley Youth Apprenticeship program in Pennsylvania, and the Philadelphia Education for Employment School-to-Careers system.

Each program contributed a list of employers participating in the program. A matching sample of nonparticipating establishments in the program areas was created. The final survey was conducted by telephone from May to August of 1996. Complete responses were gathered from 334 participating employers and 323 nonparticipants. For participants, the survey asked for information about the firm's involvement in the program, and was answered by the person supervising the interns or coordinating the firm's

participation. In the nonparticipant version, the first section asked about hypothetical concerns that firms might have about participating in a school-to-work program. The second section (for both samples) asked for general characteristics of the establishment—employee demographics and turnover, human resources policies, and so on—and was answered by a human resources manager.

Participation Rates

Many firms in the United States have been providing internships, apprenticeships, and other forms of work-based learning for many years. For example, there are several hundred thousand students in cooperative education programs. It is important to know how many employers are now participating in some form of internship. Our survey of nonparticipants provides information that would allow us to make an estimate of the participation rate in the cities that we surveyed. Before interviewing respondents, we asked them if they were providing or had provided internships. According to our data, almost 25% of employers already provide internships, although this estimate is probably higher than a national participation rate would be, given that we selected these cities because they already had large and well-established internship programs. Still, a substantial minority of employers in these areas, especially the larger employers, are already participating in work-based learning programs.

Motivations for Participation

Why do these firms participate in school-to-work programs? We suggest three broad motivations: (1) philanthropic, (2) individual, and (3) collective. The data does suggest that the most important motivation for participation remains philanthropic, although a strong minority of firms do report that bottom-line oriented reasons are the most important motivations for their participation. The importance of a philanthropic emphasis is supported both by answers to direct questions as well as the pattern of characteristics in the comparison of participating and nonparticipating firms. One interpretation might be that these programs have so far been able to recruit organizations that are philosophically oriented towards public service. There is some evidence in our study that such motivations could support a reasonably large school-to-work system. Some of the programs we studied have been able to sustain large programs for many years, even though the employers report a primacy of philanthropic motivations.

While these motivations have clearly carried these programs a long way, firms in the nonparticipating sample indicate that they would need more bottom-line oriented arguments to convince them to join up. Public sector and not-for-profit organizations have been the mainstay of the participant pool. In order to penetrate the for-profit world more successfully, program operators will have to convince employers that participation will be in their firms' interests.

On a more optimistic note, our data indicates that this problem may be less difficult if there is a strong general trend towards more progressive human resource practices. Participation in these programs does seem to be associated with a cluster of progressive human resource practices. This suggests that employer recruitment may become easier if these practices spread, even if participation itself is not necessarily in the direct short-term interest of employers.

Quality of Work-Based Learning

Our survey allows some measurements of the quality of work-based learning experiences. One of these measures is the occupation of the placement. We find that students' work-based learning experiences are for the most part not in the traditional youth employing sectors and occupations—that is, service occupations in the retail sector. Nearly one-half of all of the internships are in administrative support positions—that is, entry-level jobs in office and business employment. Interns are also overrepresented in technical occupations, while relatively few are in production machine operative positions—an area of youth concentration. Thus, it does not appear that programs are relying on the typical youth jobs. The overrepresentation in technical jobs is encouraging since these are the positions that employers often have difficulty filling; therefore, this may represent an effort on the part of some employers to strengthen their pool of available labor.

We also used four additional quality measures: (1) some characteristics of the programs, (2) the length of the internship, (3) the amount of time that it takes to learn the tasks that the interns carry out, and (4) the percentage of the time on the job in which the interns are learning. There is some evidence, according to one of these four measures, that firms tend to provide higher quality placements when they expect the interns to stay at the firm. There is also weak evidence, according to one of the other measures, that paid internships tend to be of higher quality. Still, these factors did not seem to promote

internship quality according to three of the four measures. The program characteristics suggested higher quality for internships in not-for-profit and government organizations than in private, for-profit firms, but the internships in the for-profits provided somewhat more opportunity to learn. Just as participants have more training and human resources programs than nonparticipants, so also, it seems, the stronger programs have more of them than the weaker programs, though this is not uniformly true for all measures. It also seems roughly true that these policies matter more for firms that hire than for firms that do not, indicating that firms with strong workforce quality programs may be more motivated by self-interest than philanthropy or collective interest.

This analysis has several implications for future research and program development. We clearly need more comprehensive analyses of the costs and benefits of participation in school-to-work internship programs. It will become increasingly important to have good data and arguments to support the claim that participation is in the interest of the firm. As programs grow, appeals to community service will be less and less effective. It also follows that program policies that reduce the cost to employers and facilitate participation will become increasingly important. But this runs the risk of promoting excess selectivity for interns and barring many students who might particularly benefit from internships from higher quality opportunities.

The growth of these programs and the wide variation in the educational value of work-based learning experiences suggest that it is time that program developers pay more attention to the quality of internships. First, we need better measures of quality. A fundamental problem is a lack of good conceptualizations of what an internship should provide. Our analysis provides some evidence that firms that take the interns more seriously (through expecting them to stay with the firm) do provide higher quality experiences. Internships appear to work best, at least according to these measures, if they are tied more directly to work preparation rather than educational preparation. To the extent that school-to-work programs at the secondary school level de-emphasize direct preparation for work and increase their emphasis on preparation for postsecondary education, our data indicates that the quality of the programs will be an increasing problem.

Nevertheless, the school-to-work community has only started to confront the issue of work-based learning quality. Program operators have been reluctant to push the issue of quality because of difficulties in recruiting employers, but our data suggests that already a

substantial number of employers are providing internships. Given the current levels of participation, program operators appear to have an opportunity to shift some of their focus from recruitment to quality. Moreover, there is no reason to conclude yet that research and experimentation with work-based learning will not lead to the development of approaches that will have both strong educational value and be practical in a variety of different employment environments.

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INTRODUCTION

Work-based learning is a central component of the school-to-work strategy. Yet this component is particularly difficult to set up and institutionalize because it requires that educators and program organizers find appropriate settings where students can have work-based learning experiences. Some alternatives, such as school-based enterprises, workplace simulations using computerized technology, or service learning, can be carried out within the school or at least without the direct participation of employers.[1] Other techniques, such as job shadowing or mentoring, require minimal commitment from employers. Nevertheless, a widespread system of work-based learning in the form of internships or apprenticeships will need to involve thousands of employers willing to provide placements. Paul Osterman (1995) estimates that if 25% of all high school juniors and seniors take part in work-based learning, 1.5 million work placements will be needed every year. Furthermore, those employers need to be willing to work with schools to see that those placements have educational value. Reluctant employers are not likely to cooperate enthusiastically in creating a positive learning environment on the job. Thus, the process of employer recruitment also has a strong bearing on the quality of internship placements.

This report examines the issue of employer participation in the school-to-work strategy by comparing the characteristics of participating employers to a comparison sample of nonparticipating employers. We are particularly interested in identifying the motivations of employer participants. In a highly competitive market environment, employer self-interest is probably a more stable basis for long-term participation than participation based on philanthropic or community service motivations. We also explore the quality of work-based learning placements and try to identify the relationship between the characteristics and motivations of employer participants and the quality of the internships that they provide. By better understanding the process of employer recruitment and the motivations of participants and how those relate to the quality of placements, we hope to help program operators find an adequate number of good-quality placements. The report is based on information gathered through a multilevel research design in which we have combined case studies of specific programs with a survey of employers participating in those programs and a survey of a comparison group of nonparticipating employers in those same labor markets.

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[1] For a review of the variety of roles that employers can play, see Stern (1995).

In the next section, we review existing research on employer participation. The following section examines the determinants of participation and the motivations of participants. Then, we look at the quality of placements and end with a summary and conclusions.

LITERATURE REVIEW

Research on employer participation in work-based learning falls into two broad categories. The first includes theoretical discussions about employer participation and for the most part these tend to be somewhat pessimistic. Although there are some reasons why employers might see participation to be in their interests, most theoretical discussions conclude that, on balance, the costs and disadvantages for most employers would outweigh the benefits. The second type of research consists of empirical studies, most of which are case studies of school-to-work programs which include some attention to the problems of employer recruitment. These tend to be somewhat more optimistic, reporting that employers are happy with the experiences and indeed that the student interns usually have exceeded the employers' expectations. One recent study that attempted to measure the costs and benefits of participation in a small number of individual firms did find that on average, the benefits outweighed the costs. A small number of the empirical studies involve surveys of participating employers and these have mixed conclusions about the feasibility of widespread participation.

Theoretical Arguments

The theoretical arguments behind the issue of employer participation in work-based learning programs are presented in the articles in *Learning to Work: Employer Involvement in School-to-Work Transition Programs* (Bailey, 1995b). Bailey outlines a framework of three types of motivation which may affect employers' decisions to participate in school-to-work programs: (1) philanthropic, (2) individual, and (3) collective.

Philanthropic

Employers may decide to provide work-based learning placements for philanthropic or altruistic reasons such as to reach out to the community or to help youth. While philanthropic motivations have clearly been important in getting the school-to-work

movement going, it is not clear how large a work-based learning system could be sustained based primarily on philanthropic motivations. Bailey (1995a) suggests that purely philanthropic motivation is probably not adequate to sustain a large and intensive system.

Individual Motivation

Alternatively, employers may decide to become a school-to-work partner for individual reasons such as participation is seen to bring benefits to the particular firm. For example, student interns may be of use to individual firms as short-term, no-cost or low-cost labor; they may act as temporary help. Employers as part of their long-term labor recruitment strategy may also use work-based learning programs. If student interns can be groomed to become future permanent employees, firm recruitment costs may be reduced. However, the low monetary cost of student interns is often offset by the high supervisory cost of having such interns. In addition, the goal of having youth continue on into some type of postsecondary education may reduce the employer incentives to train interns.[2] Osterman (1995) argues that there are "intangible costs" of "the opposition of the adult labor force to the extensive use of cheap youth labor in a context of broad economic insecurity" (p. 79). He contends that "the prospects for widespread employer participation seem bleak" (p. 79).

Klein's (1995) paper "Employer Incentives To Participate in a National School-to-Work Initiative" is an attempt to evaluate the economic incentives for employer participation, despite the lack of empirical research available. Incentives are organized into three areas of concern: (1) effects on business climate, (2) impact on organizational efficiency, and (3) cost of program participation. According to Klein, classical economic theory would suggest little reason for firms to participate in these programs. He states that "the incentive for profit-maximizing firms to sponsor training is nearly indistinguishable from charitable giving when students' productivity fails to offset their cost to the firm" (p. 3). If program participation is not mandatory, employers who have not participated may induce recently trained student-workers to leave the firms in which they were trained.

It is interesting that none of these discussions emphasizes the effects of the business cycle. Indeed, many of these analyses were written in the early 1990s when unemployment was relatively high. But the low unemployment levels of 1997 and 1998 may have both

[2] In some cases, employers might encourage students to go on to college with some expectation that they might continue to work during college or return after graduation. Nevertheless, a system that emphasizes enrollment in college will reduce the probability that interns will become part of the firm's long-term workforce.

strengthened the incentives for employers to participate and reduced the fear of displacement among adult workers.

Collective Motivation

Finally, there are collective reasons for employer participation, which Bailey (1995b) believes are potentially stronger than the philanthropic or individual ones. Bailey states that "one of the most common arguments for improving education in the United States is that employers lack a skilled workforce" (p. 20). The collective perspective is that while companies might not benefit immediately or directly from their own student interns, the broad implementation of school-to-work would strengthen the labor supply for all. Work-based education should help to develop a more skilled labor force overall, which should be an incentive for firms to participate. The problem with this argument is that it requires some mechanism to overcome free rider problems. Firms will be reluctant to train the future workforce if they expect that their competitors will benefit by "poaching" trained workers. This requires some sort of employer organization or consortium or even legislation that can at least socialize the cost of the training or increase the chances that employers who spend resources on training will also have access to a trained labor force. Such a system exists in the unionized construction industry, but that involves a level of labor market regulation that is unlikely to be politically acceptable in the U.S. Thus, while a collective motivation could potentially be very important, this country seems to lack the institutional structure that could make it effective.

Mathematica Policy Research, Inc.'s study of the School-to-Work Transition/Youth Apprenticeship Demonstration sites (Corson & Silverberg, 1994; Hershey & Silverberg, 1993) is a preliminary look at the implementation of these programs. They describe a wide variety of roles that employers have taken in these programs, some of which involve a considerable outlay of resources. The researchers differentiate between the employers providing real jobs versus structured skill instruction to students, and argue that the burden placed on employers can be reduced if they can choose one or the other, and not be asked to supply both (as in traditional apprenticeship programs). The Mathematica researchers are not optimistic about the possibility of implementing youth apprenticeships on a large scale because "the challenge of combining employment and a structured program of workplace training is a substantial burden on employers" (Hershey & Silverberg, 1993, p. 9).

Overall, while there are some potential benefits for employers to participate in school-to-work programs, especially when unemployment is low, the theoretical arguments

tend to be pessimistic. Benefits are balanced against real costs, and the chance that the trainees will leave (especially as school-to-work advocates its importance in preparing students for college) further reduces the benefits.

Empirical Evidence Regarding Employer Incentives and Disincentives

The scarce empirical evidence, on the other hand, tends to be somewhat more optimistic. This work consists primarily of case studies in which program operators are interviewed to elicit information about recruiting employers. Some analysts have also conducted small scale interviews with participating and nonparticipating employers. Finally, a few surveys (with moderate sample sizes) of participating employers have also been carried out. Moreover, almost all of the studies reported here were conducted either before the 1994 passage of the School-to-Work Opportunities Act, or so soon after its enactment that it would be unlikely that the Act would have had an effect.

In focus groups of employers in eight communities who were not participating in work-based learning programs, the National Center on the Educational Quality of the Workforce found that the absence of labor demand was an important disincentive for these firms to participate (Zemsky, 1994). The larger firms were consumed with "making their enterprises more competitive: leaner, more focused, less engaged in community projects" (p. 4), while the smaller firms had plenty of access to older, trained workers and saw no need to hire and train young people. (These employers might have had a different view, though, if they had faced the low unemployment rates of 1997 and 1998.) Some of the businesses also cited concern about students' communication skills. Yet while these employers who were not participating in such programs characterized them in negative ways in focus groups, surveys of participating employers found them to be quite positive about their involvement with students. The participating employers surveyed by telephone found school-to-work to be beneficial to themselves as well as to the students, and said they would sign up more students and would recommend participation to other business owners. The study's authors' suggested pitch to employers is, "Try it, you'll like it" (p. 8). Agreeing with this conclusion, researchers from Jobs for the Future believe that "once employers get involved in working closely with schools and young people, they tend to become more rather than less committed to intensive efforts" (Kazis & Goldberger, 1995, p. 188).

Case studies of internships or apprenticeships in eight companies were carried out by the American Society for Training and Development with funding from the National Employment Leadership Council (Bassi, Feeley, Hillmeyer, & Ludwig, 1997). The purpose of the study was to evaluate the costs and benefits to the participating companies. The benefits included the value of student labor, reduced training and recruitment costs, higher productivity of students hired as regular employees compared with other entry-level employees, improved community relations, improved productivity and morale of workers, and increased diversity in the workplace. The costs included expenses for the development and administration of the programs, the time of supervisors and mentors who work with the students, intern salaries, and miscellaneous costs such as tools. While many of the benefits were difficult to quantify, the study found clear net benefits from participation for three of the six firms. Three others were found to have net costs in the short-term, yet the authors suggest these might be outweighed by hard-to-measure long-term gains. One of the six companies had discontinued its program because of high costs and company personnel policies which restricted the eventual hiring of student apprentices—thus preventing the firm from benefiting from reduced training and recruitment costs in the long term.

In surveys of employers, facilitation of employee recruitment has been found to be a major incentive to participate in work-based learning programs. In a 1995 survey of 73 employers involved in 15 school-to-work transition programs carried out by the Office of Technology Assessment (OTA) (1995) (54 were currently participating employers; 19 were former participants), nearly two-thirds of employers cited recruitment goals as the most important reason for their participation. Only one-quarter chose educational and community improvement goals as their most important reason for participating, although three-fourths said these goals were a "strong" or "primary" benefit of involvement (p. 84). These findings are summarized as follows: "the self-interested goals of recruitment are more important to employers—but not greatly so—than philanthropic goals of improving education and the community" (p. 85).

The two motivations of philanthropy and employee recruitment were also found to be most salient by researchers Lynn and Wills (1994). Their telephone survey of 224 employers participating in cooperative education in 18 high schools in six different metropolitan areas found that the "two overarching reasons why employers participate are to perform a community service or to recruit entry-level workers" (p. 28). More than half of the employers reported that they retained students in their firms after the program had

ended. The larger employers in particular stated they were concerned about performing a community service and in doing so, projecting a positive image in the community. Nevertheless, more than 25% of all the employers stated that they saw involvement in the program as a way to fill part-time positions and to get lower-paid part-time help. Because of this benefit, and the employee screening functions the schools perform, the authors of this study state that "employer responses indicate that these arrangements are a 'good deal' for the employer" (p. 31).

Home-Grown Lessons by Pauly, Kopp, and Haimson (1995) is a comprehensive report on sixteen school-to-work programs. When program staff were asked to identify the most important factors which influence employers to participate, the top factor was philanthropy: "interest in helping the students and the local community" (p. 171). However, employers from different industries varied in their responses. While hospitals were interested in helping the health care sector in general and gaining positive public relations from their involvement, manufacturing firms were more interested in the recruitment benefits they could gain.

Researchers from Jobs for the Future agree that employers can benefit through program-assisted employee screening and recruitment, although "how many recruiting successes they need for the program to be worthwhile will vary by industry, firm size, and the level of commitment a firm makes to a given program" (Goldberger & Kazis, 1995, p. 29). They have found that "industries such as metalworking, health care, and printing, whose firms are experiencing shortages in skilled entry-level personnel, or which anticipate shortages in the future, are already proving to be more receptive to new strategies for finding qualified young people for entry-level jobs" (Kazis & Goldberger, 1995, p. 187). Through their work with a variety of school-to-career programs around the country, Jobs for the Future has found another way firms can profit by their participation in these programs, relating that "participating employers report unanticipated benefits to existing workers who supervise and mentor young people. Improved management skills, greater enjoyment of their jobs (and hence, better employee retention), and increased attention to improving their own skills development are frequently mentioned by workers and employers" (Goldberger & Kazis, 1995, pp. 29-30; also see Klein, 1995).

Overall Success with Recruitment and Retention

A study of LaGuardia Community College, a twenty-six year-old postsecondary cooperative education program, shows that "it is possible to maintain an internship program involving thousands of placements and hundreds of employers" (Wieler & Bailey, 1997, p. 137). Although the LaGuardia program predated the School-to-Work Opportunities Act, Wieler and Bailey argue that its original design is consistent with the Act's guidelines. An examination of employer participation in LaGuardia's program over time (the researchers obtained information on every LaGuardia internship placement between 1984 and 1995) shows that retention of participating employers is very important, perhaps even more important than recruitment, and needs further study. LaGuardia faculty believe employer self-interest motivates their participation, meaning that employers are primarily interested in the screened, inexpensive, or altogether free labor they receive through the program. Another point of interest brought out in the study is how local economic conditions can be very influential regarding the ease or difficulty of employer recruitment and retention. Local recessions make employer recruitment more difficult, and negatively affect employers' willingness to pay students for their internships.

Jobs for the Future's National Youth Apprenticeship Initiative, a study of ten programs around the country from 1991 to 1994, presents promising findings regarding employer participation. While most of the programs began with a focus in one industry, almost all increased the number of industries and occupational areas served over time. The report "Promising Practices" states that

> the programs have significant and sustained employer involvement, and the intensity of employer involvement has increased over time. . . . While a few programs have had difficulty securing the involvement of sufficient numbers of employers in specific occupational areas due to local economic conditions, most have succeeded in identifying an initial core of employers willing to provide structured work-based learning opportunities and to participate as full partners in designing and managing the initiative. (Kopp & Kazis, 1995, p. 10)

Lynn and Wills (1994) found that across the sites studied, "school staff tended to indicate that employer recruitment was not a significant problem and that there were generally enough employer slots for the referral of eligible students" (p. 23). There was, however, some problem with turnover; again, retention needs more attention. *Home-Grown Progress* (Pedraza, Pauly, & Kopp, 1997), the follow-up study to *Home-Grown*

Lessons, finds that the 16 programs have been sustained and have successfully recruited more employer partners.

By contrast, the findings of a report by OTA (1995) regarding employer recruitment were more negative. The survey found that, using the equivalent of one-half of a full-time staff person's time, "the median growth rate of employer participation in the 15 programs in the past two years has been *six employers per year*," which "translated into a median increase of *11 students per year* in the 15 programs" (emphasis the authors') (p. 76). With a growth rate of only 14% a year, and given the small starting sizes of these programs, the authors of this report believe that "many years will be required for school-to-work transition systems to reach substantial proportions of all the students in the school districts in which those systems are located" (p. 77). However, it is possible that with the passage of the School-to-Work Opportunities Act, and the increase of knowledge about and interest in school-to-work programs, a higher rate of employer recruitment can be achieved.

Thus, while the empirical work has not been universally optimistic, certainly some researchers have concluded that significant expansion is still possible. These conclusions emerge primarily from two observations. First, many employers are enthusiastic about their interns and cite a variety of benefits, especially after some experience with the students. This suggests that efforts may be made at initial recruitment with the expectation that subsequent participation will be more or less self perpetuating. Second, many of the programs, even some relatively large programs, have been able to find an adequate number of employer participants.

But these can only be seen as preliminary conclusions. The empirical evidence is far from definitive. Studies that interview participants can generate many ideas and insights but do not contain the type of information that can help predict the chances of expansion. After all, the participants are a selected group of employers who are presumably well-disposed towards the programs. Employer dropouts or those who have rejected recruitment appeals do not appear in the studies of participants. The largest scale survey, even of participants, carried out by Lynn and Wills (1994) could also be somewhat misleading since it surveyed employers participating in traditional co-op programs. While these programs have formed the basis of many school-to-work efforts, they have generally been part of vocational education programs that, unlike the school-to-work model, have been designed to find employment for graduates in their area of study immediately after high school. Thus, many

of the employers in the Lynn and Wills sample did hire their interns into permanent jobs on graduation. Current school-to-work efforts have a stronger focus on college preparation, so employers may not be encouraged to see school-to-work students as potential long-term employees.

Therefore, while there is a growing research base for the study of employer participation, many questions remain unanswered. This report can expand our knowledge of the issue in two primary ways. First, our methodology allows a comparison between participating and nonparticipating employers. Any attempt to understand why firms participate, what the characteristics of participating firms are, and how nonparticipants might be recruited requires an investigation of both participating and nonparticipating firms. So far, only a very small number of studies have interviewed nonparticipants.[3] This study does allow a comparison. Second, previous studies have not explored the relationship between employer recruitment and program quality.

SAMPLE AND METHODOLOGY

The Sample

The first step in collecting the data was to choose a sample of schools involved in school-to-work activities. We attempted to choose initiatives in which students were spending a significant amount of time in work-based learning outside of the classroom because we believed that these would be the programs which require the most commitment from employer partners. In total, thirteen efforts at ten sites, both long-running and newly established, were selected as research sites; however, only five of these are survey sites.[4]

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[3] The OTA (1995) study included only 19 former participants, while the EQW/Lynn-Wills study (Lynn & Wills, 1994; Zemsky, 1994) interviewed nonparticipants in focus groups while they conducted a formal survey of employers participating in co-op programs. Finally, a Census Bureau survey (Shapiro & Zemsky, 1996) of a random sample of firms asked whether firms participated in work-based learning programs and, therefore, did allow a comparison between those in the sample that did participate to those that did not. The Census Bureau conducted a follow up survey in 1997 and the results are reported by the National Center for Postsecondary Improvement (1997).

[4] The thirteen programs are Shell Youth Services Academy (Los Angeles, CA), New Visions Medical Careers (Rochester, NY), New Visions Graphic Communications (Rochester, NY), Madison-Oneida BOCES Manufacturing Technologies Program (Madison-Oneida County, NY), Education for Employment School-to-Careers system (Philadelphia, PA), Greater Lehigh Valley Youth Apprenticeship Program (PA), New York City High School of Economics and Finance, Financial Learning Academy of Genesee (Flint, MI), Manufacturing Technologies Partnership (Flint, MI), Careers in Health (Flint, MI), LaGuardia

The five survey site programs are City-as-School in New York City, Kalamazoo Education for Employment in Kalamazoo, Michigan, the cooperative education program at LaGuardia Community College in New York City, the Greater Lehigh Valley Youth Apprenticeship program in Pennsylvania, and the Philadelphia Education for Employment School-to-Careers system (see Figure A).

Figure A
Survey Site Programs*

	CAS	Kalamazoo	LaGuardia	Lehigh	Philadelphia
Program started	1972	1986	1971	1994	1992
Length of program	1-3 years	1-2 years	2 years	2 years	2 years
Number of students in work-based learning	650	1,000	2,000	85	1,125
Number of internships students complete	8-12	1	2	1	1
Length of internship	8 weeks, 8 to 20 hours per week	Varies; typically one year, 3-10 hours per week	13 weeks, part-time to full-time	Up to 2 years, full-time alternate weeks	Varies; up to 2 years, 8 to 16 hours per week
Paid or unpaid?	Unpaid	Both	Both	Paid	Paid
Occupational focus?	No	25 occupational areas	Attempt to match placements with students' majors	No	6 areas

* All data is from the time of our research.

City-as-School High School

City-as-School is an alternative New York City High School, grades 10-12, which opened its doors in 1972. The Manhattan branch (there are sites in other New York City

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Community College (NYC), City-As-School High School (NYC), and Kalamazoo County Education for Employment (Kalamazoo, MI).

boroughs) which we studied enrolls approximately 650 students. This is a unique school for at-risk students which awards high school credits for the completion of internships along with specified sets of related activities. For example, to receive an English credit, a student must do a substantial amount of writing at the work site, as well as complete a Learning Experience Activities Packet (LEAP), which is a curriculum guide often specifically tailored for that particular internship. In-school classes are offered, but most students spend more time in work-based learning than in the classroom; before graduating, most students will have had eight to twelve different internships (called "Learning Experiences") around the city. The school maintains a databank of over 350 employers who offer work-based learning experiences to their students.

Kalamazoo Education for Employment

The Education for Employment program in Kalamazoo, Michigan, is a school-to-work system founded on a strong relationship between educational institutions and the local business community. Begun in 1986, the system currently offers programs in twenty-five different career clusters, and over 2,000 students in grades 8 through 12 are enrolled. During their senior year, students take part in co-op education, externships, or apprenticeships, as well as occupationally based classroom work. Over one hundred employers offer work-based learning, and scores of other employers are involved through business advisory committees.

LaGuardia Community College

LaGuardia Community College was established in 1971 in New York City as the country's first community college with a mandatory cooperative education requirement; it enrolled 500 students that year. Today, it is nationally recognized as a leader in cooperative education and is one of the largest co-op programs in the United States. Student enrollment has grown to approximately 10,000, and every year 2,000 students are placed with over 300 employers. Individual internships are often sought which relate to the student's course of study, and students attend seminars in which they study issues such as workplace cultures and career-building skills.

Greater Lehigh Valley Youth Apprenticeship Program in Pennsylvania

The Lehigh Valley Youth Apprenticeship Program, begun in 1994, ceased operating in 1997 after the main school district feeding the initiative withdrew in order to

create its own apprenticeship program. It was a two-year magnet high school, which at the time of our study enrolled approximately 85 students and placed them into paid internships. Students spent alternating weeks in the classroom, with a newly created team-taught curriculum, and on the job, where they could remain with the same employer for the full two years. At the time of our survey, the program had 44 employer partners in a wide range of industries.

Education for Employment School-to-Careers System in Philadelphia, Pennsylvania

The school-to-careers initiative in Philadelphia is part of a larger effort to restructure the entire secondary school system around Small Learning Communities, a range of theme programs available in the 22 comprehensive high schools. After five years, school-to-careers coordinators are now placing over 1,500 juniors and seniors (1,100 at the time of our research) in paid work-based learning one or two days per week. The number of specific career areas available has grown to six: (1) manufacturing, (2) business, (3) health, (4) hospitality and tourism, (5) printing, and (6) transportation. At the time of our survey, 179 employers provided work-based learning placements to students; this number has since grown to over 200.

How the Survey Data Was Collected

We asked each program for a list of employers currently participating in the program. We then attempted to create a matching sample of nonparticipating establishments in the area. To do this, we used the Dun and Bradstreet Database, which lists a broad firm size category (less than 10 employees, 10-49 employees, more than 50 employees) and SIC code for all known establishments in a given geographic region (this data is accessed online and updated monthly; we used it in March of 1996). We first calculated a size-industry breakdown for the participating establishments in each program along the three size categories and ten 1-digit SIC categories. We then used the Dun and Bradstreet Database to calculate a similar size-industry breakdown for all establishments in the programs' regions. Based on a predicted 60% response rate for participating establishments and a 25% response rate for nonparticipating establishments, we created equal-sized samples of participating and nonparticipating establishments. The actual response rates were 61% for the participants and 35% for the nonparticipants. The nonparticipants were

somewhat oversampled in the industry-size groups where the internships were concentrated, while the participant sample was proportionate to the participant population in industry-size breakdown.

We then sent a letter to each of the establishments in our samples. The establishments in the participant sample received a letter directly from their program; those in the nonparticipant sample received a letter from the Institute on Education and the Economy and the RAND Corporation (which conducted the survey). Next, we conducted about 50 pretest surveys and revised the questionnaire based on the responses from those pretests. The resulting questionnaire had an average response time of about 30-35 minutes. The final survey was conducted from May to August of 1996. It was broken down into two major sections. The first section for participants asked for information about the firm's participation in the program, and was answered by the person supervising the interns or coordinating the firm's participation. In the nonparticipant version, the first section asked about hypothetical concerns that firms might have about participating in a school-to-work program. The second section (for both samples) asked for general characteristics of the establishment—employee demographics and turnover, human resources policies, and so on—and was answered by a human resources manager.

Out of 548 participating employers and 900 nonparticipating employers on our calling list, we were able to gather 334 complete responses from participating employers and 323 complete responses from nonparticipants, resulting in response rates of 61.0% and 35.9% respectively. The breakdown of the sample by area is detailed in Appendix A. (Appendix B compares the industry and occupational distribution for the respondents and nonrespondents.) The most important conclusion that arises from the comparison between these two groups is that the larger firms were more likely to respond than smaller firms. While firms with fewer than 10 workers represented 45% of the completed surveys, they represented 57% of the nonrespondents.

PARTICIPATION RATES

Many firms in the United States have been providing internships, apprenticeships, and other forms of work-based learning for many years. For example, there are several hundred thousand students in cooperative education programs. It is important to know how many employers are now participating in some form of internship. Our survey of nonparticipants does provide information that would allow us to make an estimate of the participation rate in the cities that we surveyed. Before interviewing respondents, we asked them if they were providing or had provided internships. (The screening questions and the response rates are presented in Appendix C.) Of the total of 468 establishments that responded to the screening question, 113 (24.1%) had provided internships. Table 1 displays the participation rates by size class. Clearly, the largest firms are much more likely to provide internships. Over 40% of the establishments in the labor markets covered in the survey provided internships, but even the smallest group of establishments (0-10 employees) had a participation rate of one in seven.

Table 1
Employer Participation Rates

Size Category	% of Firms in Size Category Who Have Interns
0-9	16.6
10-49	25.9
50+	41.7

Calculation is based on percentage of nonparticipants answering screening question <INTB> who answered yes to <INTB3> and is reweighted to correct for industry oversampling (see Appendix for wording of questions).

Given the generally pessimistic tone of many previous discussions about the potential for widespread employer participation, these results appear to be surprisingly high. There are several reasons why these rates are higher than expected. First, we selected these cities because they already had large and well-established internship programs and it was difficult to find such programs in other cities. Second, the internships could include those for community college students as well; therefore, they are probably higher than they

would have been if the question had been limited to internships for high school students. Third, many of these internships may not be as ambitious as those envisioned by school-to-work supporters. For example, they may have very little coordination between the school and the workplace experience. Nevertheless, the data does suggest that a substantial number of employers are already providing internships of some kind. The order of magnitude of the estimate is further supported by results from a 1997 national survey by the Census Bureau. The data from that survey suggests that about 20% of all establishments with 20 or more employees provided internships.[5]

WHY DO FIRMS PARTICIPATE?

Why do these firms participate? We have suggested three broad motivations: (1) philanthropic, (2) individual, and (3) collective. This section uses data from the survey to try to differentiate among these motivations focusing primarily on the distinction between philanthropic and self-interested motives.

What kind of firms participate in work-based learning? Table 2 displays information on the distribution of firm (organization) size among participating and the nonparticipating (comparison) firms.

[5] Unpublished data from the U.S. Bureau of the Census National Employer Survey II. For further information about this survey, see NCPI (1997).

Table 2

Selected Characteristics of Participants vs. Nonparticipants

(Standard Errors of Estimates in Parentheses)

	Participants	Nonparticipants
Firm size	340.5	33.2
	(61.8)	(9.4)
Types of training for nonmanagerial workers:*		
Tuition reimbursement	41.7%	18.9%
Registered apprenticeships	16.9%	10.8%
Paid external training	55.5%	29.3%
In-house training department or staff	57.1%	40.2%
Customized training by colleges	23.5%	8.0%
Remedial math or reading courses	11.3%	2.6%
Average total (0-6)	2.03	1.12
	(0.83)	(0.07)
Types of Human Resources programs:*		
Job rotation	32.8%	14.5%
Self-managed work teams	44.3%	20.4%
Quality circles	44.9%	15.1%
Total Quality Management	34.5%	19.8%
ESOPs or profit sharing	27.9%	22.5%
Average total (0-5)	1.28	0.91
	(0.07)	(0.07)

* Standard errors of estimates range from 2% to 3%.

Large firms are much more likely to provide internships than smaller firms, although there are still a substantial number of smaller firms that do participate. This conclusion is supported both by the comparison of the characteristics of the participant and nonparticipant samples (Table 2) and analysis of the screening question for the nonparticipant sample (Table 1). The Census Bureau survey also found a strong relationship between size and participation rates (NCPI, 1997).

It is likely that program operators looking for placements will go to the large firms first since such firms are more likely to be able to provide multiple placements. Does the firm size data have any implications for possible motivations? Large firms are more likely to have specialized community relations departments. Being more visible, large firms might have a stronger incentive to engage in public service activities. On the other hand, small neighborhood establishments might feel a particular commitment to working with a local school and community. Thus, firm size itself does not seem to have strong implications about motivations.[6] Participation rates may also reflect large fixed costs for participation. Whether the motivation is self-interested or philanthropic, there are costs; and if there is a large fixed-cost component, then a large firm could more easily absorb those costs.

On the other hand, the relationship between the number of interns (rather than whether or not the firm provides at least one internship) and the employment size of the establishment does suggest the importance of philanthropic or public relations motivations. Large firms do tend to take on more interns, although the increase in the number of interns is not proportional to the increase in the employment size.[7] Pauly et al. (1995) have also noted that large firms seem to only take a small number of interns. They suggested that this may reflect a view towards public relations; participating firms can achieve their public relations goals with a handful of interns. It seems reasonable that employers who see a direct self-interested benefit to participation would not stop at a small number of interns, especially if there is a fixed cost component—the marginal cost of additional interns would be low. Moreover, there are strong incentives for the program operators to increase the number of interns within each establishment. Thus, a significant self-interest in employing interns would suggest a stronger relationship between the size of the establishment and the number of interns.

Tables 2 and 3 present some additional characteristics of participating and nonparticipating firms. Compared to nonparticipants, participants provide more training, are more likely to emphasize competition based on quality rather than price, tend to be more oriented towards national and international markets, and have more progressive human resource practices such as job rotation, self-managed work teams, quality circles, Total

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[6] Moreover, there is no correlation between firm size and stated motivations. The respondents' direct statements about motivations are discussed later.

[7] A 10% increase in firm size amounts to a 1.1% increase in the number of interns taken (this univariate regression has a t-statistic of 4.58).

Quality Management, and profit sharing. Many of these characteristics are associated with progressive or "high-performance work organizations." This conclusion is roughly consistent with results by Shapiro and Zemsky (1996) who find that large firms, those with more highly educated workforces, those that report increased skill requirements, and those that provide more training to young workers (this last result is for non-manufacturing firms) are more likely to also provide work-based learning opportunities.

One interpretation of this is that internships are an integral part of a broad human resource strategy, suggesting that as (or if) firms move towards more progressive strategies, employer recruitment will become easier. Osterman (1994) argues that firms that adopt high-performance work practices tend also to have a more employee-oriented perspective—that is, they have a philosophical perspective towards these practices which goes beyond any narrow cost/benefit calculation for each practice, as they see the whole package as generally beneficial to the firm. Our data is certainly consistent with that argument as it would apply to participation in work-based learning opportunities, although once again, the small number of placements in the larger firms makes it more difficult to see this as a practice that firms see as fundamental to their business strategy.

Table 3 presents the distribution of participating and nonparticipating establishments by three sectors: (1) private for-profit, (2) private not-for-profit, and (3) public. The most striking issue here is the small relative share of the private for-profit sector. Just under one half of the participating establishments are for-profit while they account for 90% of the comparison firms. While not-for-profit and public sector organizations could certainly be motivated by the cost savings potentially associated with work-based learning, it is reasonable that appeals to such organizations to "help out" the community or the local school system might be more effective than such appeals would be to profit-making firms. On the other hand, not-for-profits in particular are often very short of cash, and interns might be particularly attractive as cheap labor. Cash constraints may simply make it impossible to hire additional employees so such organizations may be faced with the choice of taking an unpaid intern or doing without anyone. Indeed, unpaid internships are very much overrepresented among the not-for-profit participants.[8]

[8] Of private for-profit participants, 62% paid their interns (with a standard error of 3.8%) versus 31.5% of not-for-profits (standard error equals 5.0%) and 39.1% of government firms (standard error equals 7.3%).

Table 3

Characteristics of Product Markets

Participants vs. Nonparticipants

	Participants	Nonparticipants
Most important factor in competition is . . .*		
Price	18.56%	30.90%
Quality	55.09	40.45
Other (custom, recognition, innovation)	26.35	28.65
The main market for the firm's goods or services is . . .**		
The neighborhood	28.79%	40.28%
The metropolitan area	41.52	41.67
National	15.15	10.65
International	14.55	7.41
The firm's sector is . . .***		
Private, for-profit	48.0%	90.3%
Private, not-for-profit	32.7	9.3
Government	19.4	0.5

* Standard errors of estimates range from 1% to 4%.

** Standard errors of estimates range from 1% to 3%.

*** Standard errors of estimates range from 1% to 3%. Participants are weighted by number of interns.

Table 4 presents a probit regression of the determinants of participation. These results confirm the importance of the firm size. After controlling for sector, training, and human resource practices, firm size remains a highly significant determinant of participation. The variables for training practices and non-profit status also remain statistically significant.

Table 4

Determinants of Participation

Probit Regression

(T-Statistics in Parentheses)

Logarithm of establishment Employment size	2.82**
	(9.56)
No. of training programs[9]	0.17*
	(1.83)
No. of Human Resources programs[10]	0.07
	(0.81)
Not-for-profit sector	1.18**
	(4.23)
Government sector	1.61**
	(2.49)
Constant	1.94
	(7.38)
No. observations	547
Ln Likelihood	-254.07
Model $Chi^2(5)$	237.89
Pseudo-R^2	0.32

* Coefficient is significant at the 10% level.

** Coefficient is significant at the 1% level.

Table 5 provides another perspective on the possible motivations of employers. Here employers were asked to compare various skill categories for interns and entry-level workers. In all cases, a majority of the respondents suggested that the skills of the interns were at least as good as those of other entry-level workers, although on average, the alternative entry-level workers were preferred (more employers said that they preferred the regular workers). But that preference was weakest for the "soft" or attitudinal skills such as

[9] Of those listed in Table 2.

[10] Of those listed in Table 2.

attendance, reliability, and "attitude." Indeed, more of the respondents preferred the "attitudes" of interns than preferred the attitudes of other workers. At first, Table 5 suggests that many firms are taking interns despite lower perceived skills, perhaps suggesting that they are being motivated by philanthropic concerns. Nevertheless, the majority of firms do not perceive that they are compromising on skill levels. Furthermore, using less skilled interns still may be in the interest of the firms if the wages and costs are lower, or if they expect the interns to stay longer and eventually learn more skills.

Table 5 also compares employer attitudes about skills for employers who pay their interns to those attitudes for employers who provide unpaid internships. There is a sharp difference. Employers who provide paid internships have much more positive views about their interns. Indeed, on average, they find that the interns have better attendance, reliability, and attitude than the alternative workers. This suggests that firms that pay their interns may be more selective in choosing their interns.

Table 5
Comparisons of Skills of Interns and Entry-Level Workers

All Internships

Skill	Interns Are Better	They Are the Same	Workers Are Better
Attendance	19.0%	51.4%	29.6%
Reliability	17.2%	52.2%	30.6%
Attitude	23.7%	55.8%	20.5%
Productivity	13.8%	47.0%	39.2%
Training required to learn job	11.6%	49.4%	39.0%
Communication skills	10.7%	42.5%	46.9%
Writing skills	13.1%	40.3%	46.6%
Math skills	17.1%	52.1%	30.8%
Technical skills	15.4%	38.7%	45.9%

N = 290. Standard errors of estimates are under 2%.

Unpaid Internships

Skill	Interns Are Better	They Are the Same	Workers Are Better
Attendance	9.7%	50.7%	39.6%
Reliability	11.0%	49.0%	40.0%
Attitude	18.2%	55.2%	26.6%
Productivity	11.7%	40.0%	48.3%
Training required to learn job	8.6%	45.0%	46.4%
Communication skills	9.0%	38.9%	52.1%
Writing skills	10.5%	35.5%	54.0%
Math skills	12.4%	44.9%	42.7%
Technical skills	10.4%	34.4%	55.2%

N = 145. Standard errors of estimates are under 3%.

Paid Internships

Skill	Interns Are Better	They Are the Same	Workers Are Better
Attendance	29.3%	52.7%	18.0%
Reliability	24.8%	53.7%	21.5%
Attitude	30.4%	57.4%	12.2%
Productivity	16.1%	55.1%	28.9%
Training required to learn job	15.2%	53.1%	31.7%
Communication skills	12.8%	44.6%	42.6%
Writing skills	17.0%	44.4%	38.5%
Math skills	20.5%	57.4%	22.1%
Technical skills	20.6%	41.1%	38.3%

N = 145. Standard errors of estimates are under 2.5%.

Finally, the participants were asked directly to identify the most important factor that motivated them to participate (Table 6). Nonparticipants were asked what factors might

motivate them to participate or discourage them from participating if approached. When asked for their most important motivation, more than half of the participants claimed some philanthropic reason. Almost 26% cited an interest in contributing to the community as their primary motivation while almost 33% stated that their most important reason was a desire to improve the public education system. Nevertheless, over 41% still identified some self-interested reason as their primary basis for participation. This data also shows that private not-for-profit and public sector participants are much more likely than for-profit participants to cite philanthropic motivations. It is perhaps not surprising that the public sector and non-profit employers would respond to requests to contribute to the community.

Table 6

Biggest Motivations for Participation

Participants vs. Nonparticipants

Biggest motivation to participate is/would be . . .	Participants	Nonparticipants
Local labor shortage	3.0%	1.6%
Opportunity to test potential employees	5.8%	17.1%
Part-time/short-term hiring	10.3%	25.9%
Improving public education system	33.1%	9.3%
Encouragement from industry groups	0.6%	0.5%
Reducing benefits expenses	2.7%	0.5%
Contributing to community	25.8%	8.8%
Access to pre-screened applicants	3.7%	8.3%
Increased training is necessary	4.6%	7.8%
Access to pool of qualified workers	10.3%	20.2%

N = 329 for participants, 295 for nonparticipants. Standard errors of estimates are under 1.3%.

Primary motivation would be helping community or educational system:				
Private, for-profit sites	47.7%	(3.8%)	16.6%	(2.6%)
Private, not-for-profit sites	76.8%	(4.3%)	29.4%	(7.1%)
Government sites	64.2%	(6.7%)	100.0%	(15.3%)

Standard errors in parentheses.

While the participants emphasized philanthropic motivations, over three-quarters of the nonparticipants hypothetically looked to internships for self-interested reasons. These comparisons should be made with caution since the answers for participants are based on

experience while those for the nonparticipants are hypothetical. The experience with interns could change an employer's perspective. Indeed, the "try it, you'll like it" argument suggests that employers get involved for philanthropic reasons but find that they do benefit from participation. On the other hand, this data suggests a movement in the opposite direction. Firms must be convinced to participate on the basis of self interest, but view their participation in more philanthropic terms after some experience. While the appropriate behavioral model that underlies these results is not clear, they do suggest that experience with interns does not improve employer attitudes about their potential productivity.

This general conclusion seems to be supported by data presented in Table 7 that indicates the most important factors motivating firms *not* to participate. Participants are actually much more concerned than nonparticipants about students' lack of basic skills (26.9% list this as their biggest concern) and their unreliability or immaturity (which most concerns 22.1%).[11] This conclusion is further supported by an in-depth study of one of our survey sites that demonstrated a very high attrition rate for employer participants. Indeed, one half of all of the employers who participated in the program between 1984 and 1995 participated for only one internship cycle (Wieler & Bailey, 1997). As in previous studies, this one finds that both participating and nonparticipating employers are much more concerned about the indirect costs of training students than they are about the direct costs of paying students (though it should be mentioned that only about one half of the internships are paid). The theoretical work on participation emphasizes that employers may have little incentive to train interns since they may fear that the interns, once trained, will leave. This does appear to be a preoccupation of the nonparticipants but not the participants.

[11] On the other hand, data from Table 3 suggests that employers are not much more dissatisfied with the skills of interns than they are with those of the alternative labor supply. There are two possible explanations for the apparent discrepancy between the comparison with alternative workers and the fears about intern skills and attitudes. One explanation is that employers are also very dissatisfied with the alternative workers. Alternatively, those firms who express relative satisfaction with the interns' skills and attitudes are not the ones who show up in Table 4 as complaining about those skills.

Table 7

Factors That Discourage Participation

Participants vs. Nonparticipants

	Participants	Nonparticipants
Biggest motivation *not* to participate is/would be . . .		
Employee resistance	1.4%	3.6%
Lost productivity for trainers	15.4%	18.0%
Students might leave after training	4.8%	22.6%
Opposition from unions	3.4%	0.6%
Uncertain economic climate	3.9%	4.8%
Students lack basic skills	26.9%	11.4%
OSHA/child labor law violations	9.6%	12.0%
Students not always available	9.6%	9.0%
Students are unreliable or immature	22.1%	15.0%
Student wages are too costly	1.4%	2.4%
Problems working with schools	1.4%	0.6%

N = 208 for participants, 279 for nonparticipants. Standard errors of estimates are under 1.9%.

What can we conclude from this data about the motivations of employers? It appears that philanthropic motivations still outweigh a bottom-line perspective. Although the data is certainly open to interpretation, it is hard to argue from this evidence that most firms are participating out of a conviction that it will advance their business in any direct way. To be sure, responses to direct questions about motivations need to be viewed with some skepticism. But in addition to the responses to direct questions, the weak relationship between establishment size and the number of interns and the preponderance of public and not-for-profit firms in the participant sample also suggest a philanthropic emphasis.

One interpretation might be that these programs have so far been able to recruit organizations that are philosophically oriented towards public service. There is some evidence in our study that such motivations could support a reasonably large school-to-work program. Some of the programs we studied have been able to sustain large programs for many years, even though the employers report a primacy of philanthropic motivations.

For example, both the City-as-School and LaGuardia programs place hundreds of students each year and have been doing so for over 15 years. And our data also suggests that a significant minority of establishments in the cities we surveyed are providing internships. On the other hand, public sector and not-for-profit organizations have been the mainstay of the participant pool. In order to penetrate the for-profit world more successfully, program operators will have to convince employers that participation will be in their firms' interests. On a more optimistic note, our data indicates that this problem may be less difficult if there is a strong general trend towards more progressive human resource practices.

THE QUALITY OF INTERNSHIPS

Setting up work-based learning experiences involves much more than simply recruiting an adequate number of employers. The internships that those employers provide must have some educational value. After all, a majority of high school students already have jobs, so for work-based learning to be worth the considerable investment in time and resources that it will require, the internships must have greater educational value than the jobs that teenagers already have. Even if enough employers can be recruited, if they participate reluctantly, program operators will not have much leverage to work with the employers to guarantee the educational value of the placements.

School-to-work and work-based learning developers have not as yet been able to create reliable and systematic measures of internship quality. Formal assessments of learning on the job would allow a rigorous analysis of the most desirable characteristics of internship placements. Alternatively, a small number of studies do document the nature of the experiences that interns have on the job (Moore, 1981; Stasz & Kaganoff, 1997), but many more such studies would be needed to begin to be able to evaluate work-based learning design. Our survey does provide some data that can be used to examine the quality of internships. Here we will examine three measures: (1) the occupational and industrial distribution of internships, (2) some design characteristics of the internships, and (3) the length of time it takes to learn the tasks that the interns are carrying out. These will be explained in more detail later.

Industry and Occupational Distribution

Table 8 provides a general picture of the concentration of internships by industry and occupation in this sample. The top chart displays the industrial distribution for (1) internships in the sample, (2) employment in nonparticipating firms in the sample, and (3) youth employment. The bottom chart displays the occupational distribution of the same categories. The goal of this analysis is to determine whether the internships are primarily concentrated in typical youth jobs. It may be possible to design useful learning experiences in fast food and retail positions. Furthermore, jobs typically held by adults may have little educational value. Nevertheless, if internships were primarily in the types of jobs that many teenagers already have, then it is reasonable to conclude that the chances would be reduced that they will have an experience that is more educationally valuable than the experiences that they would have without the school-to-work initiative.

Table 8

Distribution of Internships by Industry and Occupation

Industrial Sector	Participants	Nonparticipants	Youth (national)
Agriculture, Forestry, Fishing	1.5%	1.0%	4.9%
Mining	0.0%	0.0%	0.5%
Construction	0.5%	6.2%	6.4%
Manufacturing	5.7%	10.7%	12.3%
Transportation, Comm., Utilities	2.3%	4.2%	2.9%
Wholesale Trade	1.3%	7.3%	2.6%
Retail Trade	9.2%	19.5%	38.4%
Fire, Insurance, Real Estate	6.8%	7.9%	4.1%
Services	65.7%	41.7%	25.7%
Public Administration	7.0%	1.6%	2.2%

Occupational Category	Participants	Nonparticipants	Youth (national)
Managerial/Professional	3.8%	6.9%	5.0%
Technical	11.0%	15.2%	1.7%
Sales	18.1%	7.2%	16.0%
Administrative support	45.3%	13.8%	15.8%
Service	11.5%	18.1%	26.3%
Farm	3.1%	0.1%	5.8%
Craftsman	3.1%	3.8%	8.1%
Operative/Laborer	4.0%	35.0%	21.3%

The reported numbers for the participants are taken from the sample and weighted by number of interns. Standard errors for participant column are under 2%. Nonparticipant column is taken from Dunn and Bradstreet database and weighted by employment; average establishment size within each size cell, as reported in the survey, is used as the employment weight for each size cell. Standard errors are not known. Youth sample consists of 18- to 21-year-olds reporting at least 5 hours a week of work, taken from 1995 CPS; standard errors of estimates are less than 1%. CPS national sample comes from workers 15 years or older reporting at least 5 hours a week of work, taken from 1995 CPS; standard errors of estimates are less than 0.25%.

The most important observation for our purposes is that the internships are not concentrated in retail trade, the sector with the most youth employment concentration. The majority of the internships are in the service sector, but this is a very diverse group that includes health, educational, and business services. In general, youth are most concentrated in service occupations, while nearly one-half of all of the internships are in administrative support positions. These are the entry-level jobs in office and business employment.

Interns are also overrepresented in technical occupations, while relatively few are in production machine operative positions—an area of youth concentration.

What conclusions can be drawn from these distributions? First it does not appear that programs are relying on the typical youth jobs. The overrepresentation in technical jobs is encouraging since these are the positions that employers often have difficulty filling; thus, this may represent an effort on the part of some employers to strengthen their pool of available labor.

Program Characteristics

To assess the quality of the internships, the survey asked about a number of program components that are often considered part of the school-to-work model (Table 9). Each one of these ten components is believed to strengthen the quality of a work-based learning effort. The first two—a written agreement between the school and the student (#1) and a customized plan for each student (#2)—indicate that students, teachers, and employers have thought carefully about the nature of the placement and made a specific plan. A system for documenting and assessing student learning (#3) should help evaluate whether students are actually learning anything. If a student has a specific mentor on the job (#4) and if students have a chance to experience several jobs (#5), then they should have more opportunities to learn a variety of skills. Mentors who receive some training (#6) will be better able to teach and help the interns. By providing a classroom at the workplace (#7), the participating company demonstrates particular commitment to the program and facilitates closer integration between classroom and on-the-job learning. If the company serves on the program's advisory board (#8) and if it advises schools on their curriculum (#9), then the managers will have a better understanding of the educational goals of the program and the role of the work-based learning component. Finally, efforts to have company staff teach or make presentations at the school also demonstrate more involvement with the program which could translate into more careful planning and program development (#10).

Table 9

Common Components of School-to-Work Programs

Component		Percent of Firms Practicing
1.	A written agreement between school and student	65.5%
2.	A customized training plan designed specifically for each student	47.3%
3.	Student learning at the work site is documented and assessed	90.0%
4.	A workplace mentor or supervisor who counsels students and teaches job-related skills	95.5%
5.	Rotation of students among several jobs	61.5%
6.	Training for mentors or supervisors	33.4%
7.	Company provides classrooms at the work site	20.2%
8.	Company serves on the advisory board of the program	14.9%
9.	Employer advises schools on content of curriculum	36.8%
10.	Company staff teaches or makes presentations to students at the school	24.7%

Standard errors of estimates are less than 1.5%.

Even the presence of these components is not a guarantee of high quality work-based learning experience. For example, our fieldwork indicates that "assessment" of skills often consists of a check-off sheet completed by the student's supervisor, and "customized plans" can be mechanical and superficial. Nevertheless, the presence of these components can potentially indicate a better planned and implemented work-based learning initiative with more considered and committed participation.

The data presented in Table 9 indicate that the large majority of participating firms provide a mentor and claim to assess and document student learning on the job. Internships in a majority of the participating organizations also involve a written agreement between the student and the school and the rotation of students among several positions. In contrast, many fewer employers engage in active participation with the schools—only a quarter have staff make presentations at the school, a fifth provide classrooms at the work site, and fewer than one-sixth of participants sit on an advisory board to the program.

The responses to the questions in Table 9 were added together (as zero-one variables) to develop an index, with a value from zero to ten, for the intensity of the internship (hereafter referred to as "intensity"). Table 10 displays the distribution of the intensity index. About 70% of the firms have between 3 and 6 of the practices. The modal number of practices is 4.

Table 10
Distribution of the Intensity Index

No. of Program Components	Frequency	Percent	Cumulative
1	4	1.4	1.4
2	22	7.4	8.8
3	50	16.8	25.6
4	62	20.9	46.5
5	53	17.9	64.3
6	47	15.8	80.1
7	31	10.4	90.6
8	13	4.4	95.0
9	13	4.4	99.3
10	2	0.7	100.0

Internship Duration and Learning Time

Our other measures of program quality include the duration of the internships, the amount of time it takes the intern to learn the assigned job, and the percentage of the internship spent learning (the ratio of the learning time to the duration). We are particularly interested in the latter two. The amount of time that it takes to learn the job is a measure of the amount of learning represented by the placement. There is less educational benefit in a job that can be learned in a day than one that takes a month. The percentage of time spent learning is a measure of the efficiency of the learning that takes place at the placement. If an internship lasts a year, but it only takes a month to learn the job, then little learning is taking place during much of the internship. Since internships potentially take time away from other educational experiences, such as doing homework or participating in extracurricular

activities, then it is desirable that as much time as possible during the internship be spent learning. The next several tables show several different breakdowns of quality measures between different types of firms.

Table 11 displays the means for each of the four quality measures. On average, the internships have almost 5 of the 10 program components, the internships last almost 23 weeks, it takes 14 days to learn the jobs, and the interns spend about 14% of the time on the job learning. The table also shows the relationship between the quality measures and whether the internships are paid or unpaid and whether the firms intend to hire the interns as permanent employees. Compared to unpaid internships, paid placements are strongest on all measures. All four quality measures are also higher for those firms who intend to hire their interns.

Table 11

Program Quality Measures

Hiring vs. Non-Hiring Firms and Paying vs. Non-Paying Firms

(Standard Errors of Estimates in Parentheses)

	All Firms	Firms that Do Not Hire	Firms that Hire
Mean Intensity	4.89 (0.11)	4.77 (0.16)	5.01 (0.15)
Mean Time Learning, days	13.74 (1.27)	11.27 (1.37)	16.89 (2.25)
Mean Duration, weeks	22.99 (1.20)	22.15 (1.29)	24.02 (2.14)
Mean % of Time Learning	13.7% (1.2%)	11.8% (1.3%)	16.0% (2.0%)
	All Firms	Firms that Do Not Pay	Firms that Pay
Mean Intensity	4.89 (0.11)	4.68 (0.14)	5.02 (0.17)
Mean Time Learning, days	13.74 (1.27)	7.97 (0.88)	20.28 (2.46)
Mean Duration, weeks	22.99 (1.20)	14.46 (0.70)	31.77 (2.11)
Mean % of Time Learning	13.7% (1.2%)	12.3% (1.4%)	14.8% (2.0%)

Table 12 compares the quality of internships in firms in the three sectors: (1) private for-profit, (2) not-for profit, and (3) government. The government sites have the highest program intensity—the highest number of program characteristics—but the jobs in internships in the private for-profit sector score highest on the duration and learning time variables.

Table 12
Program Quality Measures by Sector
(Standard Errors of Estimates in Parentheses)

	Private For-Profit	Not-for-Profit	Government
Mean Intensity	4.70 (.14)	4.86 (.20)	5.64 (.28)
Mean Time Learning, days	18.02 (2.20)	7.41 (0.89)	12.30 (2.53)
Mean Duration, weeks	25.26 (2.00)	18.87 (1.42)	22.57 (2.23)
Mean % of Time Learning	15.6% (1.8%)	10.4% (1.6%)	13.9% (2.8%)

Table 13 relates the quality of internships to the educational level of workers who would otherwise have the position if interns were not available. Internships at sites where a college-educated worker would otherwise perform the work score lower on these quality measures than at sites where a worker with a high school or two-year college education would otherwise do the work. This might suggest that internships are best at sites where students are not too far behind other workers, rather than sites where the skill differentials are so great that students do separate work entirely. If indeed the jobs would otherwise be filled with college graduates, then the employers probably do not expect the interns to do the same tasks. Not seeing the interns as potentially productive workers in their assigned tasks, the employers may pay less attention to them. The jobs that could otherwise be filled with workers without a high school degree also tend to score lower on the quality measures. These jobs are probably typical teenage jobs that offer few opportunities to learn. Thus, this analysis suggests that internships are most productive when they involve jobs in which the interns could realistically be expected to be productive, but that still demand skills and abilities that the interns do not already have.

Table 13

Mean Program Intensity by Job Education Level

(Weights by Sector and Size)

Sector	Intensity	Duration	Learning Time	% Learning
Primary School	5.16	20.50	4.64	6.2%
	(0.65)	(3.06)	(1.40)	(2.4%)
High School	5.10	28.33	17.10	15.1%
	(0.18)	(2.38)	(2.35)	(2.3%)
Some College	4.47	22.23	9.93	11.7%
	(0.24)	(3.70)	(3.00)	(2.6%)
Two-Year College	5.25	23.92	18.67	14.8%
	(0.42)	(0.42)	(4.61)	(2.1%)
Four-Year College	4.67	15.02	8.32	11.8%
	(0.25)	(1.57)	(1.66)	(1.9%)

Table 14 presents regressions of the determinants of three of our quality measures: (1) program intensity, (2) learning time, and (3) the learning ratio. (These analyses include controls for the five programs in case there are systematic quality differences among the five programs.) The program intensity regression suggests that public and non-profit organizations and those that hire permanently tend to provide higher quality internships. Firms that pay their interns appear to score higher in terms of the internships learning times (the time it takes to learn the job assigned to the intern) and the not-for-profits have internships with the shortest learning times. Only the not-for-profit sector variable is significant (and it is negative) in the percent-of-learning time regression. One problem with the analysis is that for-profit status, paid internships, and the intention to hire are all positively correlated[12], so the regression has trouble differentiating among them. But it is interesting that the size of the organization is not related to any of the measures of quality. It may be that non-profits in particular do try to provide good learning experiences and therefore tend to follow program guidelines by introducing the types of practices measured by the intensity variable. On the other hand, the nature of the jobs that they have available may not allow them to give interns positions that inherently have a high learning content.

[12] In Tables 11 and 12, each of these variables when analyzed alone is positively related to the learning time measures.

Table 14

Regression of Program Quality Measures on Firm Characteristics

(T-Statistics in Parentheses)

	Program Intensity (Ordered Probit Regression)	Learning Time (OLS Regression)	% of Time Learning (OLS Regression)
Logarithm of establishment employment size	0.13 (0.83)	.48 (.60)	0.00 (0.10)
Permanent placement	0.35** (2.65)	3.29 (1.19)	0.04 (1.54)
Internship is paid	-0.09 (0.51)	7.15* (1.82)	-0.00 (0.10)
Not-for-profit sector	0.29* (1.90)	-7.77** (-2.41)	-0.05* (1.77)
Government sector	0.64** (3.28)	-2.80 (-0.70)	-0.01 (0.37)
No. observations	274	261	229
Ln Likelihood	-526.33		
Model Chi^2/ Model F-statistic	34.11(0.00)	4.95 (0.00)	2.03 (0.04)
Pseudo R^2/ Adjusted R^2	0.03	.12	0.04

* Significant at the 10% level.

** Significant at the 1% level.

An interesting pattern emerges when firms claiming philanthropic motivations are compared to those who participate for self-interested purposes (Table 15). The philanthropic firms look better in terms of program features, while the internships in non-philanthropic firms tend to offer more learning opportunities. These differences are all statistically significant.

Table 15

Means of Program Quality Measures

Firms Claiming Philanthropic[13] vs. Non-Philanthropic Motivations

Quality Measure	Philanthropic	Non-Philanthropic
Mean Intensity	5.11 (0.14)	4.50 (0.17)
Mean Time Learning, days	10.26 (1.17)	17.93 (2.40)
Mean Duration, weeks	20.28 (1.15)	25.15 (2.13)
Mean % of Time Learning	12.6% (1.4%)	15.2% (2.0%)

Thus, the data presented in the last few tables offers some insight into the controversy concerning the relative value of paid and unpaid internships. During the debate about the School-to-Work Opportunities Act, some proponents held out for a provision that would require that work experience defined by the Act be paid. Their argument was that employers would take the interns more seriously if they were paid. Others argued that it would be too difficult to recruit enough employers if all internships had to be paid. This data does not show a strong relationship between quality and whether the internship is paid. On the other hand, there is some evidence that firms that take their interns more seriously in the sense that they expect to hire them after the internship is over do provide higher quality internships.

Earlier we found that firms that provided more training for their workers and that had more progressive human resource practices (associated with "high-performance work organization") also were more likely to provide work-based learning. Table 16 indicates whether the internships in the more progressive firms score higher on the quality measures. The statistically significant and positive correlation between the intensity, duration, and learning time variables, and the amount of training (top panel) or the use of progressive human resource practices (bottom panel), indicates that firms that did engage in these practices did provide higher quality internships (on all of our measures except the ratio of

[13] Philanthropic motivations are defined as participating to help the community or the educational system in Table 6.

learning time to program duration). It also seems roughly true that these policies matter more for firms that hire than for firms that do not, indicating that firms with strong workforce quality programs may be more motivated by self-interest than philanthropy or collective interest.

Table 16

Correlation of Training and Program Quality Measures

Hiring vs. Non-Hiring Firms

	Intensity	Duration	Learn Time	Ratio[14]
Firm Type				
All Firms	0.28****	0.26****	0.23****	0.02
Non-Hiring	0.12	0.16*	0.17**	0.08
Hiring	0.43****	0.32****	0.26***	-0.04

Correlation of HRP and Program Quality Measures

Hiring vs. Non-Hiring Firms

	Intensity	Duration	Learn Time	Ratio[15]
Firm Type				
All Firms	0.37****	0.11**	0.21****	0.02
Non-Hiring	0.21**	0.07	0.14	0.05
Hiring	0.53****	0.14**	0.21**	-0.04

* Significant at the 10% level.
** Significant at the 5% level.
*** Significant at the 1% level.
**** Significant at the 0.1% level.

[14] Ratio of learning time to program duration.
[15] Ratio of learning time to program duration.

CONCLUSIONS

The analysis in this report suggests that many of the employers in these areas are already participating in work-based learning programs. According to our data, a substantial minority of employers, especially the larger employers, already provide internships, although our estimate of about a 25% participation rate is probably higher than a national participation rate would be. The programs that we have studied have been able to recruit an adequate number of employers and in some cases have been able to sustain a high number of participants for many years. Moreover, for the most part, these have not been in the traditional youth employing sectors and occupations—that is, service occupations in the retail sector.

Furthermore, participation in these programs does seem to be associated with a cluster of progressive human resource and training practices. Not only are firms that use these practices more likely to participate, but there is evidence that they provide higher quality internships. This suggests that employer recruitment may become easier if these practices spread, even if participation itself is not necessarily in the direct short-term interest of employers.

The data does suggest that the most important motivation for participation remains philanthropic, although a strong minority of firms do report that bottom-line oriented reasons are the most important motivations for their participation. The importance of a philanthropic emphasis is supported both by answers to direct questions as well as the pattern of characteristics in the comparison of participating and nonparticipating firms. While these motivations have clearly carried these programs a long way, firms in the nonparticipating sample indicate that they would need more bottom-line oriented arguments to convince them to join up.

There is also evidence that firms tend to provide higher quality programs (at least as indicated by our measures) when they expect the interns to stay at the firm. Although these types of internships are better on all of the quality measures, sometimes the differences are not statistically significant. Internships with firms that emphasize philanthropic motivations score lower on the quality measures based on training time, while they score higher on the intensity measure.

This analysis has several implications for future research and program development. We clearly need more comprehensive analyses of the costs and benefits of participation in school-to-work internship programs. It will become increasingly important to have good data and arguments to support the claim that participation is in the interest of the firm. The recent set of eight case studies of the costs and benefits of participation by the National Employer Leadership Council and the American Society of Training and Development (Bassi et al., 1997) is a step in the right direction but more of this type of work is needed. As programs grow, appeals to community service will be less and less effective. It also follows that program policies that reduce the cost to employers and facilitate participation will become increasingly important. But this runs the risk of promoting excess selectivity for interns and barring many students who might particularly benefit from internships from higher quality opportunities.

The growth of these programs and the wide variation in the educational value of work-based learning experiences suggest that it is time that program developers pay more attention to the quality of internships. First, we need better measures of quality. Although we have used four measures of program quality they do not measure the content or outcomes of the experience. A fundamental problem is a lack of good conceptualizations of what an internship should provide. Our analysis provides some evidence that firms that take the interns more seriously (through expecting them to stay with the firm) do provide higher quality experiences. Internships appear to work best, at least according to these measures, if they are tied more directly to work preparation rather than educational preparation. On the other hand, our indicators do not measure the effect of internships on academic learning. Employers (and indeed educators) probably do not have a good sense of how the work-based learning experience contributes to the interns' education, broadly defined, so employer-reported measures of quality cannot be expected to capture these aspects of the experience.

This simply reinforces the argument for better conceptions of internship quality. Indeed, the school-to-work community has only started to confront the issue of work-based learning quality. Program operators have been reluctant to push the issue of quality because of difficulties in recruiting employers, but our data suggests that already a substantial number of employers are providing internships. Given the current levels of participation, program operators appear to have an opportunity to shift some of their focus from recruitment to quality. Moreover, there is no reason to conclude yet that research and

experimentation with work-based learning will not lead to the development of approaches that will have both strong educational value and be practical in a wide variety of different employment environments.

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Appendix A
Breakdown of Sample by Area

Area	# Participants	# Nonparticipants
City-as-School	81	60
Kalamazoo	72	78
LaGuardia	75	61
Lehigh	32	68
Philadelphia	74	56
Total	**334**	**323**

Case Outcomes

Outcome	# Participants	# Nonparticipants
Complete	334	323
Partially complete	10	8
Nonparticipant with interns	N/A	113
No program	47	N/A
Possibly no program	1	N/A
Business closed	0	19
Refusal	12	108
Begun, but broken off	8	18
Language difficulty	1	8
Sample problem, possible duplicate	5	0
No answer	9	33
Busy	1	4
Answering machine	23	41
Answering service	0	3
Unable to locate	4	46
General callback (attempts were made until the end of the survey period)	93	176

Appendix B

Size and Industry Breakdown of Respondents vs. Non-Respondents

(Data Only Available for Nonparticipant Sample)

Industry	% of Completes	% of Final Refusals
Agriculture, Forestry, and Fishing	1.9	1.9
Mining	0.3	0.0
Construction	4.6	8.3
Manufacturing	9.3	11.1
Transportation, Comm., Utilities	3.7	5.6
Wholesale Trade	6.2	5.6
Retail Trade	15.5	19.4
Fire, Insurance, Real Estate	6.8	6.5
Services	49.9	39.8
Public Administration	1.9	1.9

Size Category	% of Completes	% of Final Refusals
0-9	45.2	57.4
10-49	32.2	28.7
50+	22.6	13.9

Data is unweighted and therefore does not correct for oversampling.

Appendix C
Nonparticipant Screening Questions

>INTB< **Does your company participate in a school-to-work program?**

1 YES **(84 observations or 18.0% of answers)**

2 NO **(384 observations or 82.0% of answers)**

>IB1< Just to make sure, let me tell you what we mean by school-to-work programs.

In these programs, student interns work at a company while they go to school, and may stay for a semester or a year. They get school credit for this, and are sometimes paid. The company often supervises and trains the student, and gives the school an evaluation at the end. The students' work experience is usually coordinated with what they are learning in school.

Have you ever had or do you currently have any such student interns at your firm?

IF THE RESPONDENT ASKS ABOUT STUDENT TEACHERS, SAY "For the purposes of this study, we do not consider college students who are doing their teacher training to be interns."

IF THE RESPONDENT ASKS ABOUT MEDICAL INTERNS, SAY "For the purposes of this study, we do not consider medical students or graduates performing their residencies or receiving other advanced medical training to be interns."

1 YES **(126 observations or 27.2%)**

2 NO → (begin interview) **(338 observations or 72.8%)**

>IB2< Let me just make sure that we're talking about the same thing.

We're not thinking about a one-day tour of your workplace, or a one-time job shadowing experience. What we're interested in is whether you've had student interns who were enrolled in a formal school program, where there was a program coordinator or teacher with whom you had some contact.

Is this the type of internship program you are thinking of?

IF THE RESPONDENT ASKS ABOUT STUDENT TEACHERS, SAY "For the purposes of this study, we do not consider college students who are doing their teacher training to be interns."

IF THE RESPONDENT ASKS ABOUT MEDICAL INTERNS, SAY "For the purposes of this study, we do not consider medical students or graduates performing their residencies or receiving other advanced medical training to be interns."

1	YES → (ineligible, CODE = 14)	**(113 observations: 89.7% of answers or 24.1% of those answering INTB)**
2	NO → (begin interview)	**(13 observations or 10.3%)**